William Foy

443-966-1472 | wfoy@andrew.cmu.edu

EDUCATION

Carnegie Mellon University | B.S. in Electrical and Computer Engineering — Pittsburgh, PA
Intended Minor in Computer Science, QPA: 3.9/4.0 — Expected May 2022

Science and Mathematics Academy at Aberdeen High School | High School — Aberdeen, MD
Magnet Program, GPA: 4.0/4.0 — May 2018

RELEVANT COURSEWORK

Introduction to Electrical and Computer Engineering
Introduction to Computer Systems
Introduction to Android Development

Principles of Imperative Computation
Functional Programming
Concepts of Mathematics

INDUSTRY EXPERIENCE

Booz Allen Hamilton | Reverse Engineering Intern — Ft. Meade, MD
- Performed full security analysis on network-attached storage device — Summer 2019
- Reverse engineering of firmware update binaries
- Automation of custom firmware modification

Booz Allen Hamilton | Cybersecurity Intern — Ft. Meade, MD
- Performed security audit on a commercial mesh Wi-Fi router — Summer 2018
- Exploited multiple web client vulnerabilities

PROJECTS

Defense against Quadcopter Security Vulnerabilities — Aberdeen, MD
- High School Capstone Project with Booz Allen Hamilton mentor — Fall 2017 - Spring 2018
- Implemented WPA2 Wi-Fi protocol and SSH server onboard Parrot AR.Drone 2.0
- Cross-compiled software for ARM, including wpa_supplicant and Dropbear

Autonomous Racecar Project (MIT Beaver Works Summer Institute) — Cambridge, MA
- Developed software for miniature racecars to navigate an obstacle-filled course — Summer 2017
- Utilized control systems and computer vision through integration of Python with ROS

SKILLS

Languages: C/C++ ▪ Bash ▪ Python ▪ SML ▪ Java ▪ VBA
Tools: Git ▪ Unix ▪ Vim ▪ $\LaTeX$
Software: Ghidra ▪ IDA ▪ Wireshark ▪ Android Studio

EXTRACURRICULAR ACTIVITIES

Plaid Parliament of Pwning (PPP) at Carnegie Mellon University
- Participation in Capture-the-Flag competitions

Carnegie Mellon Racing
- Aided in development of firmware for Formula SAE electric racecar
- Worked with RTOS and PWM signals for fan speed control

SDC Buggy Team (Carnegie Mellon Annual Spring Carnival)
- Contributions to team efforts in buggy racing competition

HONORS

College of Engineering Dean's List, Fall 2018 and Spring 2019